

# Author Index to Volume 46

- Akera, H.—  
     *See* MacDonald, A. H. 333
- Alexiev, D.—  
     *See* Butcher, K. S. A. 317
- Badhra, A.—  
     *See* Sanyal, S. 589
- Bilger, H. R.—  
     *See* Stedman, G. E. 87
- Brennan, M. J., and Ness, K. F.—  
     Momentum transfer cross section for  
     e<sup>-</sup>-Kr scattering 249
- Briggs, B. H.—  
     Observations of atmospheric dynamics  
     using radar techniques 127
- Burden, C. J.—  
     *See* O'Shaughnessy, D. 231
- Butcher, K. S. A., Alexiev, D., and  
     Tansley, T. L.—  
     Minority carrier diffusion lengths for  
     high purity liquid phase epitaxial  
     GaAs 317
- Cadogan, J. M., Campbell, S. J.,  
     Zhao, X. L., and Wu, E.—  
     Investigation of magnetic ordering in  
     RCo<sub>12</sub>B<sub>6</sub> (R = Y, Nd) by <sup>57</sup>Fe  
     Mössbauer spectroscopy 679
- Cai, Y.—  
     *See* Leckey, R. 717
- Campbell, S. J. —  
     *See* Cadogan, J. M. 679
- Chakraborty, B., Paul, S. N., Sur, A. K.,  
     and Kashyapi, P. K.—  
     Nonlinear aspects of wave propagation in  
     a magnetised plasma in the presence of  
     Coriolis force 821
- Chauduri, N.—  
     *See* Sanyal, S. 589
- Chowdhury, A. R.—  
     *See* Mukhopadhyay, J. 807
- Chowdhury, K. R.—  
     *See* Mukhopadhyay, J. 807
- Choy, T. C.—  
     *See* Finlayson, T. R. 597
- McKinnon, B. A. 601
- Clark, A.—  
     *See* Jagadish, C. 435
- Collett, M. J.—  
     *See* Walls, D. F. 61
- Cram, L.—  
     *See* Spencer, S. 195
- Crompton, R. W., and Morrison, M. A.—  
     Analyses of recent experimental and  
     theoretical determinations of e-H<sub>2</sub>  
     vibrational excitation cross sections:  
     Assessing a long-standing  
     controversy 203
- Das, M. P.—  
     *See* Neilson, D. 327, 329
- Das Sarma, S., and Hu, B. Y.-K.—  
     Electronic properties of quasi-  
     one-dimensional semiconductor  
     nanostructures: Plasmons and  
     exchange-correlation effects in  
     quantum wires 359
- Delbourgo, R.—  
     On parametric and dispersive  
     integrals 729
- Deshmukh, P. C.—  
     *See* Padma, R. 497
- Dobson, J. F.—  
     Plasmons on wide epitaxially-grown  
     quantum wells 391
- Dreizler, R. M.—  
     *See* Whelan, C. T. 241
- Du, A., and Wei, G. Z.—  
     Magnetic properties of layered  
     Heisenberg ferromagnets 571
- Elcombe, M. M.—  
     *See* Yim, K. K. 535
- Ericson, T. E. O.—  
     Recent developments in nuclear  
     physics 15
- Faul, J.—  
     *See* Leckey, R. 717
- Finlayson, T. R.—  
     *See* Liu, M. 695
- Finlayson, T. R., Morgan, M. J., and  
     Choy, T. C.—  
     Preface to Special Issue on Electrons  
     in Solids 597
- Ghosh, B.—  
     *See* Sanyal, S. 589
- Green, F.—  
     Charge fluctuations in  
     high-electron-mobility transistors:  
     A review 447
- Halstead, T.—  
     *See* Jagadish, C. 435

- Hannaford, P.—  
Foreword: Tenth AIP National Congress  
Special Issue 1
- Hariharan, P.—  
Optical interferometry: The  
post-Michelson era 103
- Hauser, N.—  
See Jagadish, C. 435
- Henderson, J. A.—  
See Oitmaa, J. 613
- Hicks, T. J., and Wildes, A. R.—  
The magnetic moment distribution in  
ferromagnetic Co-Mn alloys 667
- Hu, B. Y.-K.—  
See Das Sarma, S. 359
- Hu, C. D., and Mahanty, J.—  
Quasi-particle interference effect in the  
Coulomb blockade problem 583
- Hutton, D. R., and Troup, G. J.—  
A pilot study of paramagnetic resonance  
centres in selected Argyle  
diamonds 663
- Jagadish, C., Clark, A., Larsen, C. A.,  
Hauser, N., Petracic, M., Thompson,  
T. D., Halstead, T., and  
Williams, J. S.—  
Characterisation of III-V multilayers  
grown by low-pressure metal organic  
vapour-phase epitaxy 435
- Johnson, M. D.—  
See MacDonald, A. H. 345
- Josefsson, T. W., and Smith, A. E.—  
Local-field effects in the high- $q$ -vector  
dielectric response of Si 635
- Kansal, M. K., and Trikha, S. K.—  
Effect of short-range repulsive  
interactions on the dynamics of the  
methane molecule 305
- Molecular dynamics of the phase  
transition in solid deuterated  
methane 523
- Kashyapi, P. K.—  
See Chakraborty, B. 821
- Larsen, C. A.—  
See Jagadish, C. 435
- Leckey, R., Riley, J., Cai, Y., Faul, J., and  
Ley, L.—  
How successfully does angle-resolved  
photoemission determine the band  
structure of semiconductors? 717
- Ley, L.—  
See Leckey, R. 717
- Li, Z.—  
See Stedman, G. E. 87
- Liley, B. S.—  
Space charge effects in the Cavalleri  
determination of electron diffusion  
coefficients in gases 773
- Liu, G. Q., and Thomas, A. W.—  
Consistent treatment of pion exchange  
force and meson versus quark  
dynamics in the nucleon-nucleon  
interaction 737
- Liu, M., Finlayson, T. R., and  
Smith, T. F.—  
Low-temperature thermal expansion  
anomalies in indium and its solid  
solution alloys with thallium 695
- Luo, Q., and Melrose, D. B.—  
Covariant formulation of the  
ponderomotive force 503
- MacDonald, A. H., Akera, H., and  
Norman, M. R.—  
Quantum mechanics and  
superconductivity in a magnetic  
field 333
- MacDonald, A. H., Yang, S.-R. E., and  
Johnson, M. D.—  
Quantum dots in strong magnetic fields:  
Stability criteria for the maximum  
density droplet 345
- McKinnon, B. A., and Choy, T. C.—  
A tight binding model for the density of  
states of graphite-like structures,  
calculated using Green's  
functions 601
- Mahanty, J.—  
See Hu, C. D. 583
- Melrose, D. B.—  
Solar flares: Current dissipation or  
magnetic annihilation? 167
- See Luo, Q. 503
- Michels, A.—  
See Thomas, A. W. 3
- Mitroy, J.—  
Close coupling theory of  
positron-hydrogen scattering 751
- Mohn, P., Supanetz, E., and Schwarz, K.—  
Electronic structure and spin fluctuations  
in the fcc Fe-Pd system 651
- Morgan, M. J.—  
See Finlayson, T. R. 597
- Morrison, M. A.—  
See Crompton R. W. 203
- Mukherjee, A.—  
See Sanyal, S. 589

- Mukhopadhyay, J., Chowdhury, K. R., and Chowdhury, A. R.—  
Effect of streaming and finite geometry on a resonance-like phenomenon in beam-plasma systems 807
- Neilson, D.—  
See Świerkowski, L. 423
- Neilson, D., and Das, M. P.—  
Foreword and Introduction to Special Issue on Nanostructure and Two-dimensional Electron Systems 327, 329
- Ness, K. F.—  
See Brennan, M. J. 249
- Norman, M. R.—  
See MacDonald, A. H. 333
- Norman, P.—  
A heuristic account of the electron-phonon coupling mechanism in the formation of pre-martensite tweed structures 689
- O'Shaughnessy, D., and Burden, C. J.—  
Variational wavefunctions for non-compact  $U(1)$  lattice gauge theory: Comparison with exact result 231
- Oitmaa, J.—  
See Yim, K. K. 535
- Oitmaa, J., and Henderson, A.—  
High-temperature thermodynamics of the Hubbard model 613
- Opat, G. I.—  
On the effects of gravitational fields on the electrical properties of matter 647
- Osborne, C. F.—  
Band structure calculations for the heavy transition metals: Parametrisation methods, band structures and problems with iteration techniques 625
- Padma, R., and Deshmukh, P. C.—  
Optical oscillator strengths from 'electron impact photoionisation' in the RCE potential 497
- Pain, G. N.—  
Method for production of uniform thin films from the vapour phase 121
- Paul, S. N.—  
See Chakraborty, B. 821
- Pegg, D. T.—  
Wave function collapse in atomic physics 77
- Perrot, F.—  
See Rasolt, M. 381
- Petravic, M.—  
See Jagadish, C. 435
- Poulton, M. P.—  
See Stedman, G. E. 87
- Prytz, A.—  
See Robson, R. E. 465
- Rasolt, M., and Perrot, F.—  
Spontaneously symmetry-broken current-carrying states in nanostructures 381
- Riley, J.—  
See Leckey, R. 717
- Robson, R. E.—  
Anisotropic dispersion of a charged particle swarm in a turbulent gas in an electrostatic field 261
- Robson, R. E., and Prytz, A.—  
The discrete ordinate/pseudo-spectral method: Review and application from a physicist's point of view 465
- Rowe, C. H.—  
See Stedman, G. E. 87
- Rowe, G. W.—  
Collisionless damping of fast and ion-cyclotron surface waves 271
- Saito, K.—  
See Thomas, A. W. 3
- Sanyal, S., Ghosh, B., Sarkar, S. K., Badhra, A., Mukherjee, A., and Chaudhuri, N.—  
An analysis of cosmic ray air showers for the determination of shower age 589
- Saporoschenko, M.—  
See Talib, Z. A. 799
- Sarkar, S. K.—  
See Sanyal, S. 589
- Schwarz, K.—  
See Mohn, P. 651
- Smith, A. E.—  
See Josefsson, T. W. 635
- Smith, T. F.—  
See Liu, M. 695
- Spencer, S., and Cram, L.—  
Large-scale magnetic fields in spiral galaxies 195
- Stedman, G. E., Bilger, H. R., Li, Z., Poulton, M. P., Rowe, C. H., Vetharaniam, I., and Wells, P. V.—  
Canterbury ring laser and tests for nonreciprocal phenomena 87
- Stephens, G. L.—  
Water vapour and its role in the Earth's greenhouse 149
- Storey, E. P.—  
See Walls, D. F. 61

- Supanetz, E.—  
     *See* Mohn, P. 651
- Sur, A. K.—  
     *See* Chakraborty, B. 821
- Szymański, J.—  
     *See* Świerkowski, L. 423
- Świerkowski, L., Neilson, D., and  
     Szymański, J.—  
     Electron liquid in double-layer  
     structures 423
- Talib, Z. A., and Saporoschenko, M.—  
     Ion-molecule reactions and mobilities of  
      $SF_6^+$  and  $SF_5^+$  ions in  $SF_6$  gas 799
- Tan, S. M.—  
     *See* Walls, D. F. 61
- Tansley, T. L.—  
     *See* Butcher, K. S. A. 317
- Thomas, A. W.—  
     *See* Liu, G. Q. 737
- Thomas, A. W., Saito, K., and  
     Michels, A.—  
     The challenge of the EMC effect 3
- Thompson, T. D.—  
     *See* Jagadish, C. 435
- Tjemkes, S. A.—  
     *See* Stephens, G. L. 149
- Trikha, S. K.—  
     *See* Kansal, M. K. 305, 523
- Troup, G. J.—  
     *See* Hutton, D. R. 663
- Vetharaniam, I.—  
     *See* Stedman, G. E. 87
- Walls, D. F., Collett, M. J., Storey, E. P.,  
     and Tan, S. M.—  
     Quantum measurements in atomic  
     optics 61
- Walters, H. R. J.—  
     *See* Whelan, C. T. 241
- Walther, H.—  
     Single atom experiments and the test of  
     quantum physics 37
- Wei, G. Z.—  
     *See* Du, A. 571
- Wells, P. V.—  
     *See* Stedman, G. E. 87
- Whelan, C. T., Walters, H. R. J., and  
     Dreizler, R. M.—  
     Some remarks on the use of effective  
     charges in the study of electron impact  
     ionisation processes 241
- White, G. K.—  
     Introduction to Special Issue on  
     Electrons in Solids 599  
     Electrons in transition metals at high  
     temperatures 707
- Wildes, A. R.—  
     *See* Hicks, T. J. 667
- Williams, J. S.—  
     *See* Jagadish, C. 435
- Wu, E.—  
     *See* Cadogan, J. M. 679
- Yang, S.-R. E.—  
     *See* MacDonald, A. H. 345
- Yim, K. K., Oitmaa, J., and  
     Elcombe, M. M.—  
     Lattice dynamics of  $YBa_2Cu_3O_{6+x}$   
     ( $x = 0.25, 0.5, 0.75$ ) 535
- Zhao, X. L.—  
     *See* Cadogan, J. M. 679

